



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D119-646-243
Job Sheet 180168



Part No: D119-646-243

Job Qty: 1 ea

Part Name: AW119 Repl. Skidtube with Heavy Duty Wearplates, Float Compatible -F/LH or RH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/29/18

Job Tracking No:

Due Date: 8/6/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG IIN-D119-646 REV D, D3905-045 REV E SHEETS 4,5, 7-14 IPP RevA: New issue DD verified by:EC
IPP REV B 12.11.05 (DEOD3905-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20 per chg003 ECN13-534
DD verf:JLM IPP REV:D 15.01.19 AS PER ECN-14-628 DD verf:JLM IPP REV:E 16.11.02 chg as per D3905
revD(DEO) DD verf:JLM IPP REV:F 17.05.19 as per dwg D3905 rev.e DD verf:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		8/6/18	0.00	0.00	Start Up Skid tubes-1		
110	Skid tubes	1 pcs		8/6/18	0.00	2.07	Skid tubes-1		
120	HandFinish	1 pcs		8/6/18	0.00	1.05	HandFinish1		SA 18-07-09
130	QC	1 pcs		8/6/18	0.00	0.00	QC7-1		MLH
150	Skid tubes	1 pcs		8/6/18	0.00	2.07	Skid tubes-1		MLH
155	CNC Bend Skid tubes	1 pcs		8/6/18	0.00	1.20	CNC Bend Skid tube		MLH
165	QC	1 pcs		8/6/18	0.00	0.00	QC5		MLH
180	Skid tubes	1 pcs		8/6/18	0.00	2.07	Skid tubes-1		MLH
190	QC	1 pcs		8/6/18	0.00	0.00	QC5		BE
200	CNC Bend Skid tubes	1 pcs		8/6/18	0.00	1.20	CNC Bend Skid tube		MLH
210	Skid tubes	1 pcs		8/6/18	0.00	1.41	Skid tubes-1		MLH
220	QC	1 pcs		8/6/18	0.00	0.00	QC5		BE
224	Skid tubes	1 pcs		8/6/18	0.00	3.70	Skid tubes-1		BE MLH
225	QC	1 pcs		8/6/18	0.00	0.00	QC5		PD 18-05-03
226	QC	1 pcs		8/6/18	0.00	0.00	QC10		PD 18-05-03
227	HandFinish	1 pcs		8/6/18	0.00	1.05	HandFinish2		BE 18-08-04
240	SprayPaint	1 pcs		8/6/18	0.00	0.56	Spray Paint		KT 18-06-14
242	Outsource	1 pcs		8/6/18			ATE003-VC	5	
245	QC	1 pcs		8/6/18	0.00	0.00	QC14		DAS 18-08-08
250	HandFinish	1 pcs		8/6/18	0.00	1.05	HandFinish4	005020	BE 18-08-16
260	QC	1 pcs		8/6/18	0.00	0.00	QC5		ML 18-08-11
270	HandFinish	1 pcs		8/6/18	0.00	1.49	HandFinish4		BE 18-08-16
280	QC	1 pcs		8/6/18	0.00	0.00	QC5		ML 18-08-11
285	HandFinish	1 pcs		8/6/18	0.00	1.05	HandFinish3		BE 18-08-16
286	QC	1 pcs		8/6/18	0.00	0.00	QC5		AUG 17 2018
288	DC	1 pcs		8/6/18	0.00	0.00	DC		21 AUG 21 2018
290	Packaging	1 pcs		8/6/18	0.00	0.00	Packaging3-1		21 AUG 21 2018
300	QC21-FG	1 Ea		8/6/18	0.00	0.00	QC21		21 9-89

Part Op 110 - 1- Inspect Mat'l D2500-1-190 for damage 2- Ensure squareness of ends
Descriptions: 120 - Chemical Conversion Coat per QSI005 4.1
130 - QC7-Inspect Chemical Conversion Coat

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS			
Part No. _____	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
NCR No. _____	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	

Date : _____ Step #: _____ QTY Effective : _____ MRB (OS1042) Approval _____

Description Work Order Deviation

Dart Aerospace Ltd.
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Hewitson, ON K8A 1K7
CANADA
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Email: sales@dartaero.com
www.dartaero.com

Container No: S089667



Part: D119-646-243

Job No: 180168

Serial No/Batch: S089667

Revision:
Inspector:
Exp Date:
Instructions:

Date: 07/06/18

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Design ☐	Operator ☐	Bending ☐	Out of Sequence ☐	Part Moved ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concen ☐	Off-set ☐	Drawing ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Mislabeled ☐	Finish ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple ☐	Fit/Function ☐	Misread ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	Misaligned/off center ☐	Turning Sequence ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐			
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

150 - 1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill first side only. 2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes. 3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477 4- Scribe batch # inside aft end of tube

155 - 1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end. 2- Ensure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.

165 - QC5- Inspect part completeness to step on W/O

180 - 1- Verify dimension of bend as per dwg D3905 2- Buff out marks left from bending. 3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, open to finished size 4- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E) ***DO NOT OPEN FWD SADDLE HOLES*** 5- Drill Aft wearplate and wearpad holes using DT9546 and DT9545 as per dwg D3905 detail G open to finished size 6- Deburr, blow out chips from inside of tube 7- Bond web in place as per Dwg D3905 & QSI 015. A/R Sikaflex-291 M138874 Sikaflex expire date: 19-07-06 Start: _____ Time: _____ Finish: _____ Time: _____ ***** (Adhere for 12 hours)

190 - QC5- Inspect part completeness to step on W/O

200 - 1- Bend Fwd end of tube using bender 1 and bend prog. D3905 & Folio -04 Fwd. Use bending aid DT9544 ensure proper positioning 2- Cut Fwd end of tube as per dwg. ***VERIFY MEASUREMENT BEFORE CUTTING***

210 - 1- Buff out marks left from bending 2- Drill Fwd cap holes using DT8215. 3- Open Fwd saddle holes to finished size as per dwg 4- Drill Fwd x-bolt hole and open to finished size using DT9816 5- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg. 6- Drill towing hole using DT10047 locate from FWD saddle hole and open to finished size. 7- C'sink FWD cap hole as per detail "C" 10- Deburr, blow out chips from inside of tube.

220 - QC5- Inspect part completeness to step on W/O

224 - NOTE: TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD GROUND HANDLING FIXTURE, IF FIXTURE FITS WELL THEN PROCEED. FIXTURE DT10091. 1- Countersink x-bolt holes as per dwg 2- Remove alodine prepare for welding 3- Insert x-bolt spacers 4- Weld x-bolt spacer as per dwg A/R Alum rod Batch: 138834 5- Grind welds flush as per dwg 6- Counter bore x-bolt holes as per dwg 7- Deburr 8- Pick D2855-5 cap and transfer drill missing hole. Deburr and identify cap with skid tube batch#.

225 - QC5- Inspect part completeness to step on W/O TEST FIT USING FIXTURE DT10091.

226 - QC10- Inspect visual per QSI004- ground welds

227 - Pressure Wash per QSI005 4.3

240 - Spray Painting per QSI005 4.2 *****AS PER DEO DETAIL "F" NOTE 8, SHEET 8 MASK THIS AREA, DO NOT APPLY PRIMER OR PAINT***** PRIME AS PER DWG AND QSI 005 4.2 BATCH: 138862 PAINT WHITE AS PER DWG AND QSI 005 4.2 BATCH: 138910

245 - QC14- Inspect Spray Paint

250 - Assemble as per dwg 1- Install inserts as per Dwg D3905.

260 - QC5- Inspect part completeness to step on W/O

270 - 1- Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers A/R Sikaflex-240/-291 M138874 Sikaflex expire date: 06/19 2- install plugs assembly as per dwg. 3- Inspect for foreign objects as per QSI 024 4- Install D2855-3 Cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 M138874 Sikaflex expire date: 06/19 5- Install insert in D2855- Cap. Install cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 M138874 Sikaflex expire date: 06/19 6- Install (2) D5101-041 and (1) D5101-047 as per dwg by using DT10117

280 - QC5- Inspect part completeness to step on W/O

285 - Wing Walk as per dwg QSI005 4.4 Batch 5098120

286 - QC5- Inspect part completeness to step on W/O

288 - Document Control Photocopy bluefile & type labels per PPP D119-646-243 CHG 005

290 - Identify as per dwg & Stock Location: _____

300 - QC21- Final Inspection - Work Order Release

005028

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2500-1-190	Ext'n - I' Beam Tube 4"	1 Ea (1 ea)	90-Start up Operation	
D3681-1	Spacer	8 Ea (8 ea)	90-Start up Operation	5084724
D3903-1	Spacer	12 Ea (12 ea)	90-Start up Operation	5084655
D3885-3	Float Web	1 Ea (1 ea)	180-Skidtubes	5096470
D2579	Crossbolt Spacer	2 Ea (2 ea)	224-Skidtubes	5051552
D2855-5	Cap	1 Ea (1 ea)	224-Skidtubes	5066894
ALS4-1032-130	Rivnut	10 Ea (10 ea)	250-HandFinish	5007279
ALS4-1032-225	Rivnut	1 Ea (1 ea)	270-HandFinish	5058138
AN3C46A	Bolt	4 Ea (4 ea)	270-HandFinish	5095398
AN3C50A	Bolt	4 Ea (4 ea)	270-HandFinish	5079135
AN3C5A	Bolt	12 Ea (12 ea)	270-HandFinish	5095214
AN4C46A	Bolt	3 Ea (3 ea)	270-HandFinish	5093600
D2855-3	Cap	1 Ea (1 ea)	270-HandFinish	5066002
D3411-3	Washer	16 Ea (16 ea)	270-HandFinish	5099749
D3672-1	Washer, Phenolic	2 Ea (2 ea)	270-HandFinish	5150074
D3847-1	Wearpad	1 Ea (1 ea)	270-HandFinish	5084440
D3847-11	Wearpad	1 Ea (1 ea)	270-HandFinish	5026852

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

D3849-045	Run-on Landing Wearplate Aft For Float Skidtubes	1 Ea (1 ea)	270-HandFinish
D3849-047	Run-on Landing Wearplate Fwd For Float Skidtubes	1 Ea (1 ea)	270-HandFinish
D3904-1	Washer	16 Ea (16 ea)	270-HandFinish
D5101-041	Crossbolt Spacer Assembly	2 Ea (2 ea)	270-HandFinish
D5101-047	Crossbolt Spacer Assembly	1 Ea (1 ea)	270-HandFinish
D5101-3	Insert	6 Ea (6 ea)	270-HandFinish
D5101-5	Insert	6 Ea (6 ea)	270-HandFinish
MS21043-3	Nut	8 Ea (8 ea)	270-HandFinish
MS21043-4	Nut	3 Ea (3 ea)	270-HandFinish
MS24694-C52	Screw	2 Ea (2 ea)	270-HandFinish
NAS1149C0332R	Washer	8 Ea (8 ea)	270-HandFinish
NAS1149D0416J	Washer	3 Ea (3 ea)	270-HandFinish

S089093.
 F154850
 S091775
 F159549.
 S072225
 F158939.
 F158796.
~~S027748~~ S062620
~~S038763~~ S089277
 S067269-1
 S071663
 FM131511

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2500-1-190	1	37	0
	D3681-1	8	219	0
	D3903-1	12	190	0
180-Skidtubes	D3885-3	1	2	0
224-Skidtubes	D2579	2	175	0
	D2855-5	1	81	0
250-HandFinish	ALS4-1032-130	10	13,354	0
270-HandFinish	ALS4-1032-225	1	4,225	0
	AN3C46A	4	122	0
	AN3C50A	4	159	0
	AN3C5A	12	2,030	0
	AN4C46A	3	83	0
	D2855-3	1	26	0
	D3411-3	16	24	0
	D3672-1	2	1,076	0
	D3847-1	1	80	0
	D3847-11	1	21	0
	D3849-045	1	0	0
	D3849-047	1	3	0
	D3904-1	16	90	0
	D5101-041	2	14	0
	D5101-047	1	5	0
	D5101-3	6	56	0
	D5101-5	6	42	0
	MS21043-3	8	1,125	0
	MS21043-4	3	401	0
	MS24694-C52	2	187	0
	NAS1149C0332R	8	5,075	0
	NAS1149D0416J	3	2,986	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

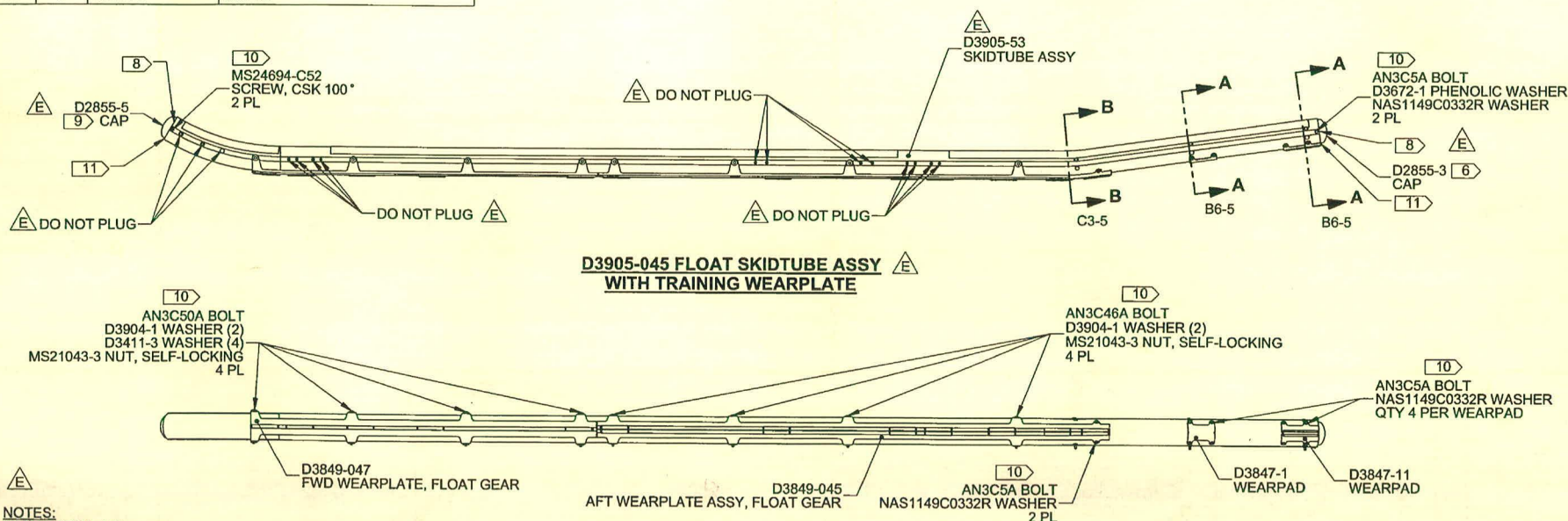
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

ITEM	QTY -045	P/N	DESCRIPTION
	X	D3905-045	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	16	D3411-3	WASHER
4	2	D3672-1	PHENOLIC WASHER
5	1	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
8	1	D3849-047	FWD WEARPLATE, FLOAT GEAR
9	16	D3904-1	WASHER
10	1	D3905-053	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSS BOLT SPACER
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY -045	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	12	AN3C5A	BOLT
17	4	AN3C46A	BOLT
18	4	AN3C50A	BOLT
19	3	AN4C46A	BOLT
20	8	MS21043-3	NUT, SELF-LOCKING
21	3	MS21043-4	NUT, SELF-LOCKING
22	2	MS24694-C52	SCREW, CSK 100°
15	12	NAS1149C0332R	WASHER
24	6	NAS1149D0416J	WASHER

SHOP COPY
RETURN TO
ENGINEERING
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 180168 MJS



**D3905-045 FLOAT SKIDTUBE ASSY
WITH TRAINING WEARPLATE**

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-045" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
 - 7) WEIGHT: 48.0 lbs
 - 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
 - 9) USE D3905-053 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\phi 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
 - 10) SEAL FASTENERS WITH SIKAFLEX -241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
 - 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

RELEASED
2017-05-08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 4 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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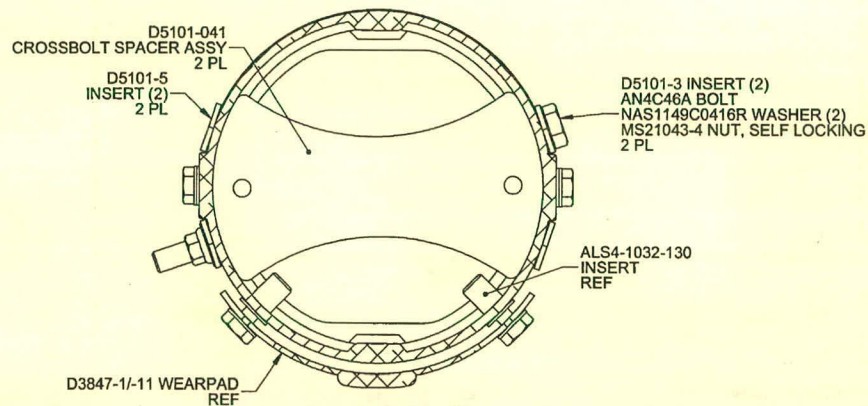
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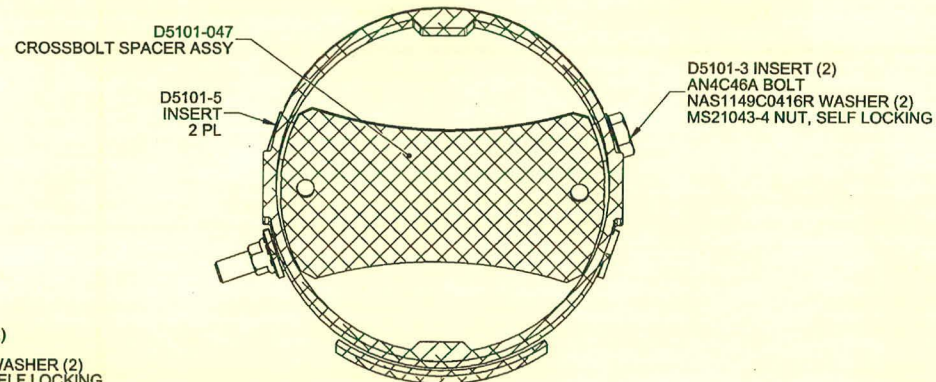
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B

A



SECTION A-A
SCALE: 12X



SECTION B-B
SCALE 12X

RELEASED
2017-05-08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 5 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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WORK ORDER NON-CONFORMANCE / UPDATE

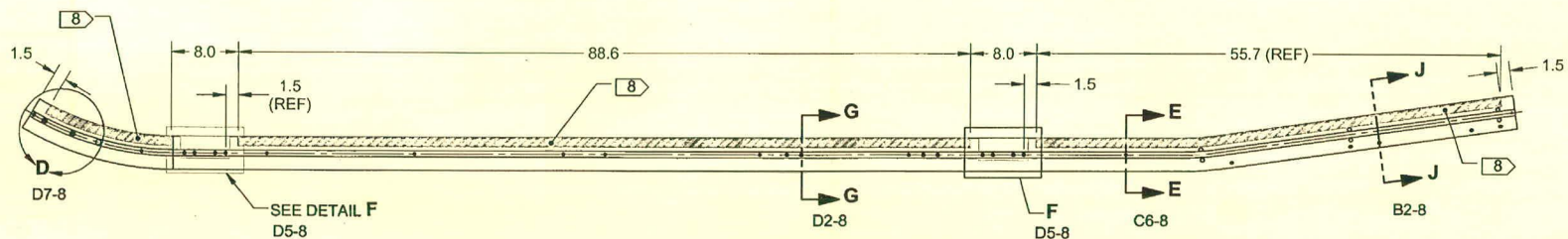


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ITEM	QTY	P/N	DESCRIPTION
	X	D3905-053	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	8	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-063	SKIDTUBE SUB ASSEMBLY
5	10	ALS4-1032-130	INSERT



D3905-053 SKIDTUBE SUB ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

RELEASED
2017-05-08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	WK	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 7 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

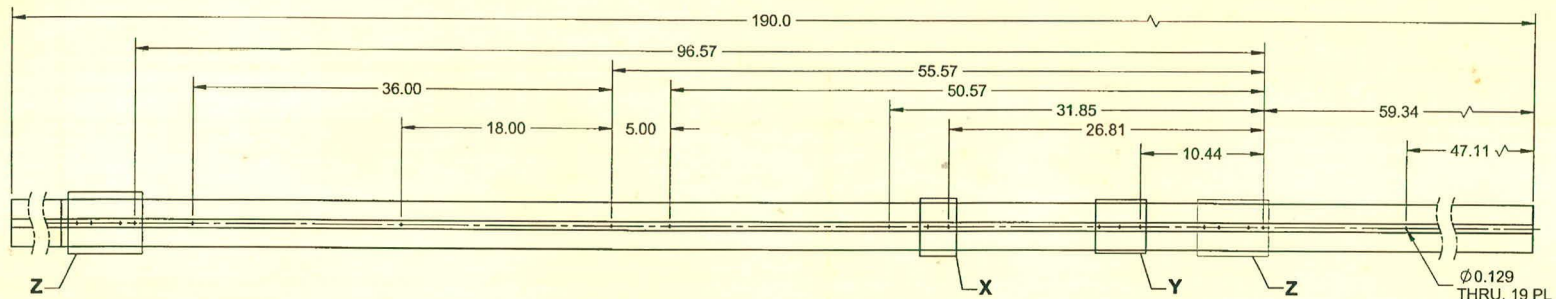
Work Order update only ☐

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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
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Root Cause		FAULT CATEGORY							
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

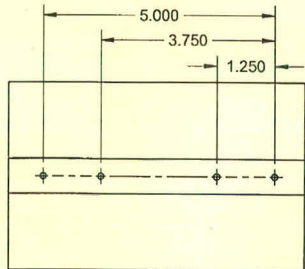
8 7 6 5 4 3 2 1

D D

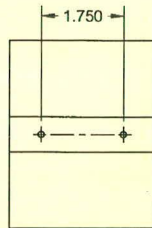
C C



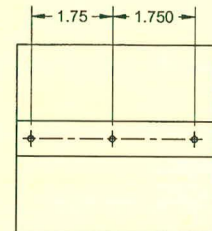
D3905-3 SKIDTUBE PILOT HOLE DETAIL



DETAIL Z
SCALE: 4X



DETAIL X
SCALE: 4X



DETAIL Y
SCALE: 4X

B B

NOTES:

- 1) MATERIAL: MAKE FROM D2500-1-190 EXTRUSION
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A

RELEASED
2017 -05- 08

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	WK		
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	DD	D3905	SHEET 14 OF 14
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	17.03.13	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

A A

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					